

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. When strikethrough cannot easily be perceived, or when five or fewer characters are deleted, [[double brackets]] are used to show the deletion. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 7, 12, 15, and 18 in accordance with the following:

Claims 1-6 (CANCELLED)

7. (CURRENTLY AMENDED) ~~Apparatus~~ An apparatus for detecting a target molecule in vivo or in vitro, comprising:

a reagent tag that fluoresces when subjected to near infrared light emissions injected into the target molecule;

a light source that emits light in a wavelength comprising near infrared light emissions;

a sample holder for holding the target molecule for analysis, ~~comprising:~~ comprising,
an uptake ~~channel;~~ and, channel, and

an analysis target area within the uptake channel having ~~an activated~~ a matrix therein, ~~wherein a~~ the matrix is being activated by binding a capture molecule for the target molecule to the matrix;

an optical system comprising a lens; and

a detector detecting the reagent tag that fluoresces ~~wherein the light source causes the dye to fluoresce within the sample holder wherein the detector detects the dye when subjected to the light source.~~

8. (ORIGINAL) The apparatus according to claim 7 wherein the light source is a laser diode.

9. (ORIGINAL) The apparatus according to claim 7 wherein the optical system comprises a fiber optic lens and a bandpass filter.

10. (ORIGINAL) The apparatus according to claim 7 wherein the detector comprises a photodiode coupled to an LCD.

11. (PREVIOUSLY PRESENTED) The apparatus of claim 7 wherein the analysis target area comprises an area composed of a solid phase within the channel having physical barriers on opposite sides of the area.

12. (CURRENTLY AMENDED) ~~Apparatus~~ An apparatus for detecting a target molecule in vivo or in vitro, comprising:

a reagent tag that fluoresces when subjected to near infrared light emissions injected into the target molecule;

a light source that emits light in a wavelength comprising near infrared light emissions;

a sample holder for holding the target molecule for analysis, ~~comprising:~~ comprising,

an uptake channel, ~~having an analysis target area having an activated~~

a matrix therein, wherein a within the uptake channel, the matrix is being
activated by binding a capture molecule for the target molecule to the ~~matrix;~~ and, matrix, and

an analysis target area ~~comprising an area~~ extending from an end of the uptake channel that is free of solid phase;

an optical system comprising a lens; and

a detector detecting the reagent tag that fluoresces ~~wherein the light source causes the dye to fluoresce within the sample holder wherein the detector detects the dye~~ when subjected to the light source.

Claims 13-14 (CANCELLED)

15. (CURRENTLY AMENDED) The apparatus according to claim 12, further comprising:

a reservoir extending from a side of the uptake channel having a diameter larger than a diameter of the uptake channel; ~~and,~~ and

a tube connected to the side of the uptake channel to extend ~~an extension the from the~~ uptake channel into the reservoir, wherein a bubble, ~~for analysis, to be analyzed~~ is formed on an end of the ~~extension tube, wherein the bubble is comprising~~ the analysis target area.

16. (CANCELLED)

17. (PREVIOUSLY PRESENTED) The apparatus according to claim 7, wherein the reagent tag comprises a laser dye.

18. (CURRENTLY AMENDED) The apparatus according to claim 17, wherein the laser dye is soluble in water and binds electrostatically to one or more of albumin, lipoproteins, and ~~gamma-globulins~~ globulins.

19. (PREVIOUSLY PRESENTED) The apparatus according to claim 18, wherein the laser dye comprises a negative charge.

20. (PREVIOUSLY PRESENTED) The apparatus according to claim 19, wherein the laser dye has the formula $C_{45}H_{48}N_3O_{13}S_5Na_3$.